

Title: Marathon Markers (Comparing and Ordering Fractions)

Brief Overview:

This three day unit is a culminating activity to engage students in ordering fractions, plotting fractions on a number line, and comparing two fractions with like and unlike denominators. The lesson provides an opportunity for students to develop fraction sense as they determine if fractions are closest to or equivalent to 0, $\frac{1}{2}$, and 1. Additionally, students order fractions from least to greatest, divide a number line into equal parts, and students determine how to apply comparing fractions to real life situations

NCTM Content Standard:

Develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers;

Use models, benchmarks, and equivalent forms to judge the size of fractions.

Grade/Level:

Grades 3-4

Duration/Length:

3 sessions, for 60 minutes a session

Student Outcomes:

Students will:

- Compare and order like fractions
- Plot points to represent fractions with denominators of 2, 3, and 4 on a number line
- Estimate the value of a fraction as being close to zero, one-half, or 1
- Identify a fraction as greater than, less than, or equal to 1
- Compare and order fractions or mixed numbers using the symbols $<$, $>$, or $=$ and locate their positions on a number line.

Materials and Resources:

Day One

Pre Assessment

- Sticky notes
- Chart paper

Engagement

- Book “The Wishing Club: A Story about Fractions,” by Donna Jo Napoli
- Optional Props: marbles, quarters, and cookies.

Exploration

- Sentence strips one per student
- Color pencils or crayons
- Dark colored marker

Explanation

- Chart paper
- Marker

Application

- Copies of game board for each pair of students
- Two sided counters
- Dice

Enrich

- Copy of student resource “Ordering Fractions” for each student
- Assessment
- Copy of student resource “Fraction Sense” for each student

Day Two

Engagement

- A gift bag or brown paper bag for each group of four students
- Copy and cut a set of pictures for each group, teacher resource “Engagement Page Day One”
- An assortment of objects from home and the classroom that are examples of real number lines (Examples include but are not limited to : rulers, measuring tapes, thermometers, yardsticks, measuring cups, historical timelines, and any other examples you may find)
- Index card for each group

Exploration

- Masking tape
- Blank register tape or strips of bulletin board paper
- Two math textbooks and a student sized dry eraser board to create a ramp
- Five small toy cars

Explanation

- Four colored markers or small round stickers

Application

- Student resource “Race Car Runway Game Board”
- Student resource “Race Car Runway Place Mat #1”
- Student resource “Six-Sided Cube” (Please cut and tape prior to lesson)

Enrich

- Student resource “Race Car Runway Game board”
- Student resource “Race Car Runway Place mat #2”

- Student resource “Six-Sided Cube” (Please cut and tape prior to lesson)

Assessment

- Copy of student resource “Race Car Assessment” for each student

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Day Three

Exploration

- Chart paper
- Marker
- Space on the chalkboard
- Chalk

Application

- Student resource “Comparing Fractions” activity sheet

Enrich

- Student resource “Comparing Fractions Problem Solving” activity sheet

Assessment

- Student Resource “Comparing Fractions” Summative Assessment

Development/Procedures:

Day 1

Pre-assessment

- Record the headings, “Closest to Zero”, “Closest to $\frac{1}{2}$ ”, and “Closest to 1” on chart paper
- Give each student a sticky note with a fraction. Use teacher resource, “Marathon Markers Pre Assessment” for a list of fractions.
- Have the students place the fraction into the appropriate category listed on the board
- Provide an opportunity for three students to share how they determined the category.
- Allow the charts to be displayed throughout the unit. Have students alter their answers if necessary throughout the unit. An answer key is provided.

Engagement

- Read aloud “The Wishing Club: A Story about Fractions” by Donna Jo Napoli and think aloud about the fractions that you noticed in the story.
- As an option you can demonstrate events that occur in the book using cookies, marbles, and quarters.

Exploration

- Pose a question to the class: “If you are really hungry would you rather have $\frac{1}{6}$ of a pizza or $\frac{1}{8}$ of a pizza?” Allow a few moments for discussion.

Explanation

- Divide students into groups of 4.
- Assign each student in the group a number (3, 4, 6, 8).
- Give each student a sentence strip.
- Model how to fold a sentence strip into fractional parts based on their number.
For example the student that chooses the number, eight, needs to fold the sentence strip into eight equal parts.
- Direct students to fold the sentence strips into equal parts.
- Direct students to shade in the equal parts and label each part (For example, if a student folded the sentence strip into fourths each space should be labeled $\frac{1}{4}$).
- Have students turn the sentence strip over and label the folded lines (for example if a student folded the sentence strips into sixths the folded parts should be labeled $\frac{1}{6}$, $\frac{2}{6}$ etc.).
- Have the student create a fraction wall by displaying the sentence strips starting with thirds and ending with eighths.
- Once the students have placed the strips on the wall have them discuss what they notice about size of fractional parts for about 2-3 minutes.
- Next, have them share what they noticed and write down their observations on chart paper.
- Explain to students how the number line they created is spaced equally.
- Next, describe/explain how visually we can see that some fraction are close to zero, some are close to $\frac{1}{2}$, and others are close to 1.
- Order fractions with the same and different denominators from least to greatest (stressing which fractions are closer to 0, $\frac{1}{2}$, or 1) so that students can visually see that the larger the denominator the smaller the fraction when the numerator is one.

Application

- Use student resource, “Fraction Marathon Game.” Show the directions and model the game.
- Distribute student resource, “Fraction Marathon Game” board and directions.
- Allow students to play the game in pairs.
- Observe students as they play and encourage them to use the number line that they created. Help them determine whether or not a particular fraction is closer to 0, $\frac{1}{2}$, or 1.

Differentiation

Reteach

Play the Fraction Marathon game with a small group of students and plot the fraction on a number line so that the student can see which fractions are closer to 0, $\frac{1}{2}$, or 1 (use the sentence strips as a tool and guide).

Enrich

After students play the Fraction Marathon game have them complete student resource “Ordering Fractions” with a partner. An answer key is provided.

Assessment

- Students will individually complete the student resource, “Fraction Sense”, activity sheet where students classify fractions as closest to zero, one-half, or one. An answer key is provided.

Day 2

Engagement

- Place gift bags in the center of the table for each group of four children.
- Each gift bag should contain real life examples of number lines with and without fractions.
- The purpose of this engagement is to immerse students with applications for understanding number lines.
- Utilize resource, “Real Life Number Line Pictures” page along with items found in the home and classroom. Examples include: rulers, measuring tapes, thermometers, yardsticks, measuring cups, any historical timelines.
- Note: historical number lines can include student interests and curriculum related topics.
- Allow students to explore and discuss the items in the bag
- Monitor the group discussions by simply circulating around the classroom. You may want to take anecdotal notes concerning student understanding.
- After three to five minutes distribute index cards to students to allow each group to record their observations.
- Each group shares one idea that was discussed during the engagement.

Exploration

- Pose a question to the class: “At the race track one car travels $\frac{3}{4}$ of a mile while another car went $\frac{2}{3}$ of a mile. Which car went further?” Allow a few moments for discussion.

Explanation

- Tape a piece of blank register tape on the floor.
- Use two math textbooks and a student sized dry eraser board to create a ramp to the left of the blank register tape.
- The blank register tape will serve as the runway for the lesson.
- **Ready, Set, GO!**

Steps:

1. Call upon three volunteers to model a racing game.

2. Instruct a volunteer to release a car from the top of the ramp.
 3. Once the car has stopped rolling the student's turn is complete.
 4. Repeat steps two and three with the other two students.
- Ask the class to describe the location on the runway (number line) where each of the cars has landed.
 - Remind students to use math vocabulary and the benchmarks of zero, one-half, and one in order to describe the location of each car.
 - Record the location of each car with a marker or a round sticker to indicate where the car landed.
 - Allow students to describe the location of the cars.
 - Remove the runway from the floor. (Please be sure that all three cars have been replaced with a drawn circle or a sticker before removing from the floor.)
 - Model for the class how to properly divide the number line into equal parts.
 - Identify the zero, one-half, and one on the number line to establish benchmarks.
 - Lead a class discussion to determine the number of equal parts that best describes the location of the cars on the number line.
 - The runway/number line is separated into fourths, eighths, or sixths or which ever amount best suites the class model.
 - Decide according to the position of the cars.
 - Label the number line with fractions to identify where each car landed.
 - Ask students if they are better able to describe the location of each car with the runway turned into a number line? Explain why.

Application

- Distribute student resource "Race Car Runway" game and student resource "Placemat #1."
- Model how to play the game and pair students to play.
- Observe students as they play and encourage them to use the number line that they created on Day 1.

Differentiation

Reteach

Play "Race Car Runway" with a small group of students using Placemat #1. Model how to use the fraction bars (or another fraction manipulative) in order to help them understand where fractions are located on a number line

Enrich

After playing the "Race Car Runway" using Placemat #1, have students play again using "Placemat #2" which is more challenging.

Assessment

- Students will individually complete the "Race Car Assessment" activity sheet to show their understanding of locating fractions on a number line between 0 and 1.

Day 3

Engagement

Have students draw and plot fourths and eighths on a number line.

Exploration

Present the following scenario: “Your family is packed and ready for a trip to the amusement park. Everyone grabs the bags and snacks for the day to head out to the car. Mom’s gas tank is $\frac{7}{8}$ full. Dad’s car is $\frac{3}{4}$ full. Whose car has the most gas?”

Allow a few moments for discussion.

Explanation

- Draw a number line on the chalk board or chart paper and have a student mark $\frac{7}{8}$ and $\frac{3}{4}$ on the number line.
- Ask a student to explain in words why $\frac{7}{8}$ is more than $\frac{3}{4}$.
- Model and think aloud how you would compare unlike denominators $\frac{2}{6}$ and $\frac{5}{8}$
- Divide class into pairs to compare the following fractions: $\frac{1}{3}$ and $\frac{4}{5}$, $\frac{3}{12}$ and $\frac{3}{10}$, lastly $\frac{3}{5}$ and $\frac{1}{2}$.
- Have several partners share with the class how they determine which fraction was least or greatest.

Application

- Give the students the student resource “Comparing Fractions” and have each student work independently and then share answers with a partner when he/she is finished. An answer key is provided.

Differentiation

Reteach

With a small group of students model/think aloud numbers 1-4 on student resource “Comparing Fractions.” Next have students in the small group think aloud to solve problems 5-10.

Enrich

Once students have finished student resource “Comparing Fractions” have them complete the student resource “Comparing Fractions Problem Solving” independently. An answer key is provided.

Summative Assessment:

Distribute the student resource “Comparing Fractions Summative Assessment.” The students will apply their knowledge by determining equivalent fractions, determining which fractions are closest to 0, $\frac{1}{2}$, or 1, comparing and ordering fractions, and placing fractions on number line. Students will answer a BCR that will reflect their knowledge of fractions as part of a whole, and fraction locations on a number line.

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Marathon Markers Preassessment

1/3	4/8
2/3	5/8
3/3	6/8
1/4	7/8
2/4	8/8
3/4	1/6
4/4	2/6
1/2	3/6
2/2	4/6
1/8	5/6
2/8	6/6
3/8	0/2

Pre Assessment Activity

Directions:

- Label three pieces of chart paper with the following headings: Closest to zero, Closet to $\frac{1}{2}$, or Closet to 1 whole.

Closest to Zero	Closest to $\frac{1}{2}$	Closest to 1

- Record each fraction on a sticky note.
- Distribute a fraction to each student.
- Have the students place the fraction in one of three categories.

Math Marathon Pre Assessment Answer Key

Marathon Markers Pre Assessment

$\frac{1}{3}$	$\frac{4}{8}$
$\frac{2}{3}$	$\frac{5}{8}$
$\frac{3}{3}$	$\frac{6}{8}$
$\frac{1}{4}$	$\frac{7}{8}$
$\frac{2}{4}$	$\frac{8}{8}$
$\frac{3}{4}$	$\frac{1}{6}$
$\frac{4}{4}$	$\frac{2}{6}$
$\frac{1}{2}$	$\frac{3}{6}$
$\frac{2}{2}$	$\frac{4}{6}$
$\frac{1}{8}$	$\frac{5}{6}$
$\frac{2}{8}$	$\frac{6}{6}$
$\frac{3}{8}$	$\frac{0}{2}$

Pre Assessment Activity

Directions:

- Label three pieces of chart paper with the following headings: Closest to zero, Closest to $\frac{1}{2}$, or Closest to 1 whole

Closest to Zero	Closest to $\frac{1}{2}$	Closest to 1
$\frac{0}{2}$	$\frac{1}{3}$	$\frac{3}{3}$
$\frac{1}{4}$	$\frac{4}{8}$	$\frac{3}{4}$
$\frac{1}{8}$	$\frac{2}{3}$	$\frac{4}{4}$
$\frac{2}{8}$	$\frac{2}{4}$	$\frac{2}{2}$
$\frac{1}{6}$	$\frac{3}{8}$	$\frac{6}{8}$
	$\frac{4}{8}$	$\frac{7}{8}$
	$\frac{5}{8}$	$\frac{8}{8}$
	$\frac{2}{6}$	$\frac{4}{6}$
	$\frac{3}{6}$	$\frac{5}{6}$
		$\frac{6}{6}$

- Record each fraction on a sticky note.
- Distribute a fraction to each student.
- Have the students place the fraction in one of three categories.

Fraction Marathon Game

2 players

Materials:

Two-sided color counters (each player chooses his/her color)

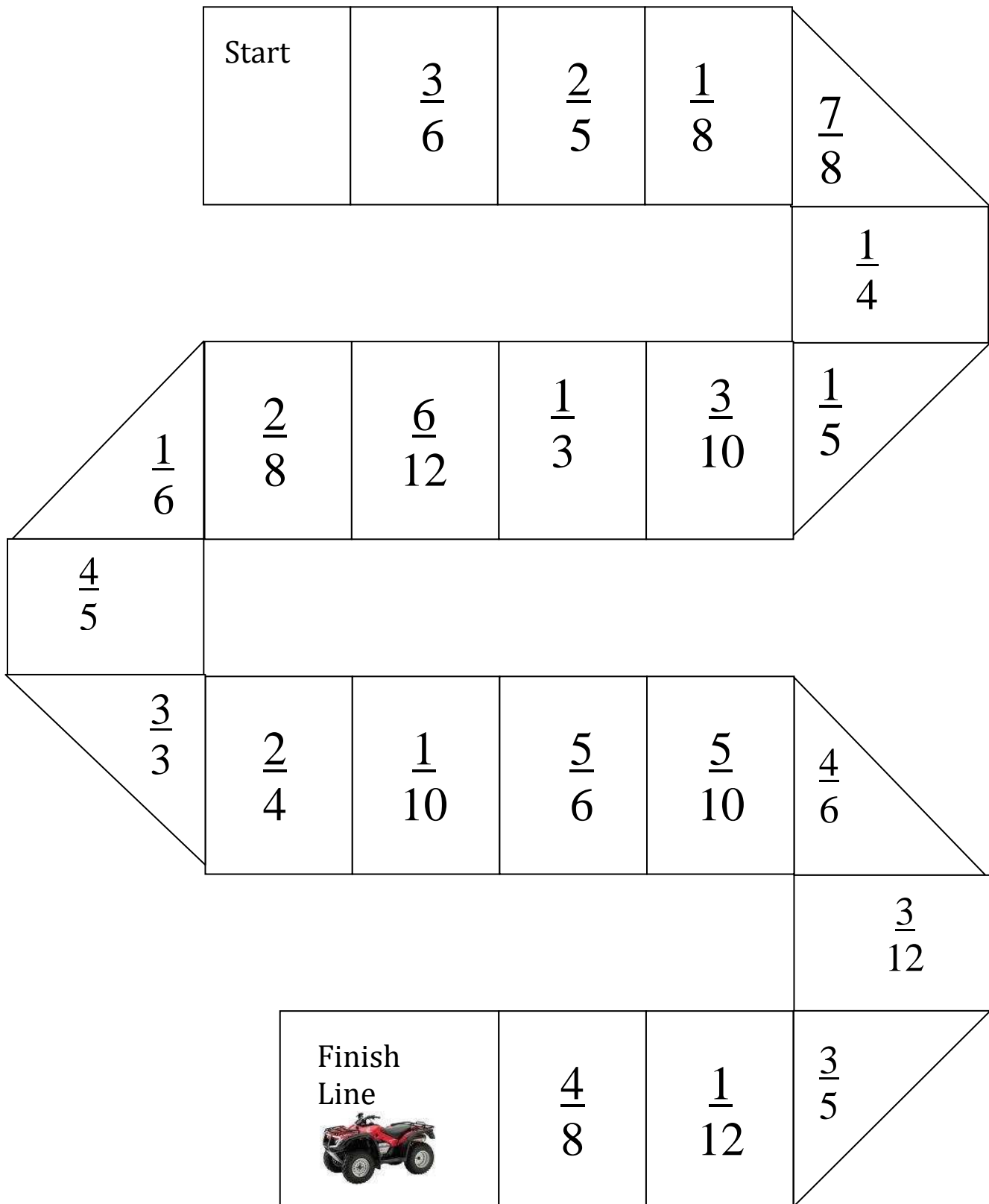
Die

Game Board

Directions:

1. Each player rolls the die. The player with the highest number goes first.
2. The first player rolls the die and moves the number of spaces on the die
3. The first player then identifies whether or not the fraction he/she landed on is closer to zero, closer to $\frac{1}{2}$, or closer to 1. If the fraction is closer to 0 the player has to move one space back and then the second player takes a turn. If the fraction is closer to $\frac{1}{2}$ or exactly $\frac{1}{2}$ the player stays in his/her spot, and the second player takes a turn. If the player's fraction is closest to 1 he/she can move up three spaces and take another turn.
4. The first player who gets to or beyond the finish line wins the game.

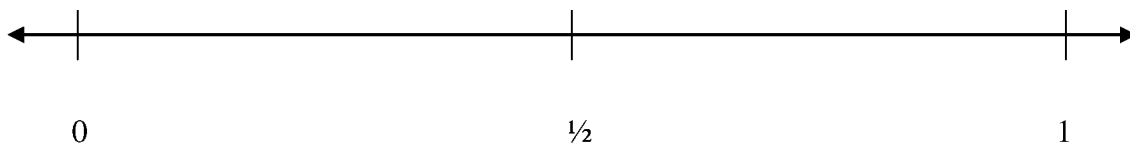
Fraction Marathon Game



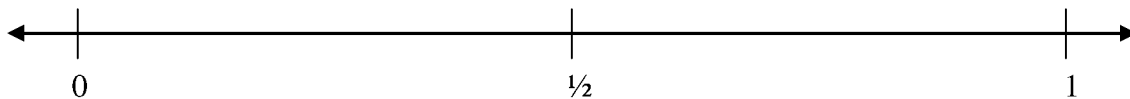
Ordering Fractions

Directions: Order the fractions from least to greatest on the number line.

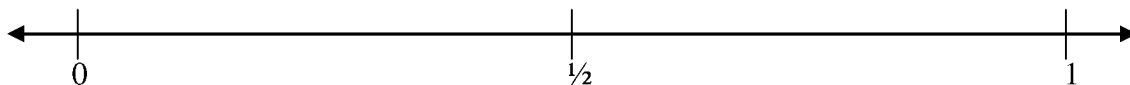
$$\frac{2}{3} \quad \frac{1}{3}$$



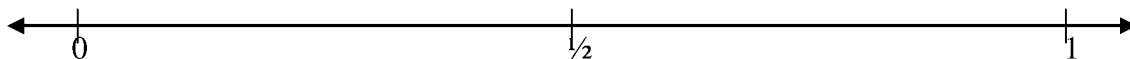
$$\frac{3}{4} \quad \frac{1}{4} \quad \frac{2}{4}$$



$$\frac{2}{6} \quad \frac{4}{6} \quad \frac{1}{6} \quad \frac{5}{6}$$



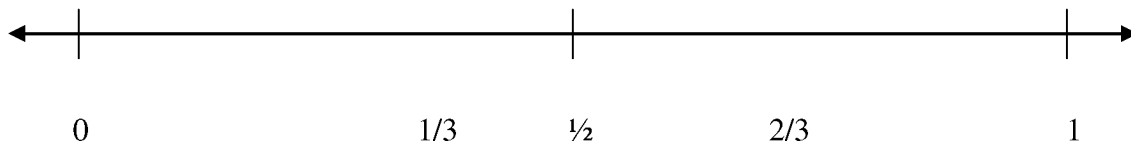
$$\frac{7}{8} \quad \frac{3}{8} \quad \frac{6}{8} \quad \frac{5}{8} \quad \frac{1}{8} \quad \frac{2}{8} \quad \frac{4}{8}$$



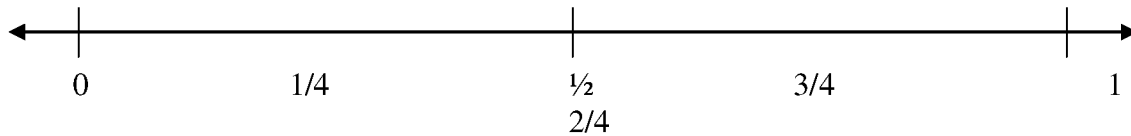
Ordering Fractions

Directions: Order the fractions from least to greatest on the number line.

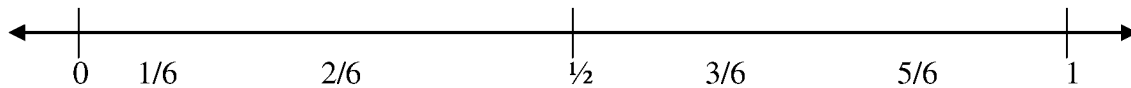
$$\frac{2}{3} \quad \frac{1}{3}$$



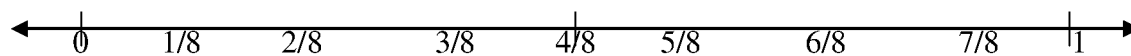
$$\frac{3}{4} \quad \frac{1}{4} \quad \frac{2}{4}$$



$$\frac{2}{6} \quad \frac{4}{6} \quad \frac{1}{6} \quad \frac{5}{6}$$

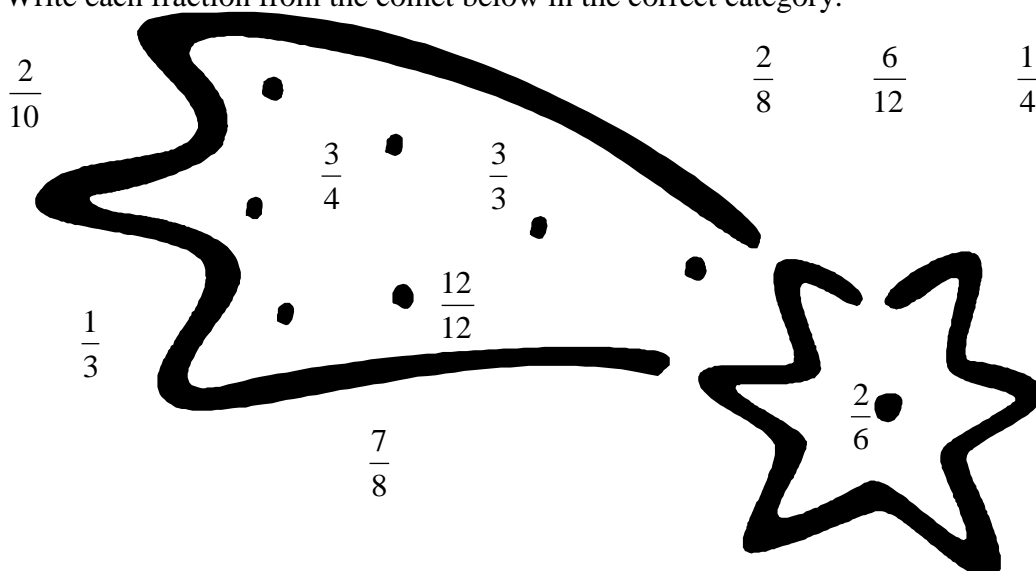


$$\frac{7}{8} \quad \frac{3}{8} \quad \frac{6}{8} \quad \frac{5}{8} \quad \frac{1}{8} \quad \frac{2}{8} \quad \frac{4}{8}$$



Fraction Sense

Write each fraction from the comet below in the correct category.



Close to Zero	Close to or Equal to $\frac{1}{2}$	Close to or Equal to 1


$$\frac{2}{10}$$

$$\frac{2}{8}$$

$$\frac{6}{12}$$

$$\frac{1}{4}$$

$$\frac{3}{4}$$

$$\frac{3}{3}$$

$$\frac{12}{12}$$

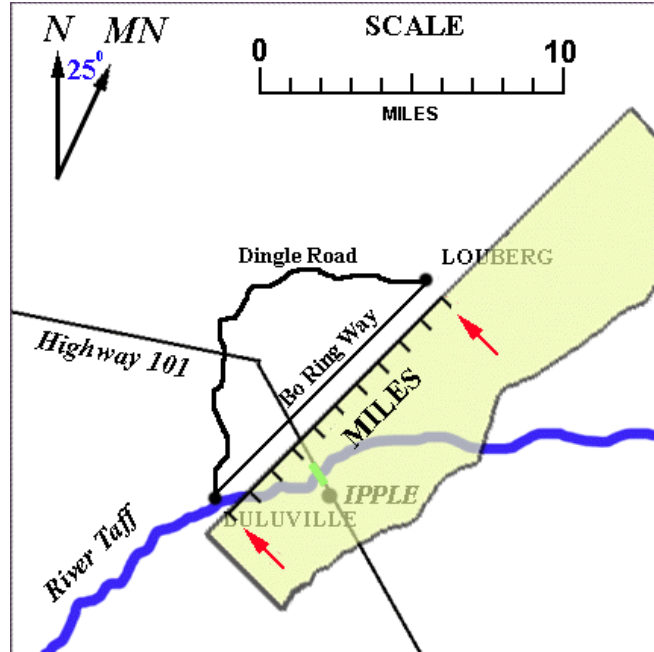
$$\frac{1}{3}$$

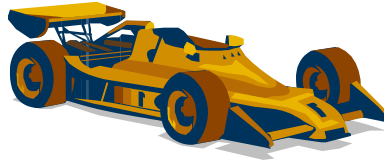
$$\frac{7}{8}$$

$$\frac{2}{6}$$

Close to Zero	Close to or Equal to $\frac{1}{2}$	Close to or Equal to 1
$\frac{2}{10}$	$\frac{1}{3}$	$\frac{12}{12}$
$\frac{2}{8}$	$\frac{6}{12}$	$\frac{3}{4}$
$\frac{1}{4}$	$\frac{2}{6}$	$\frac{7}{8}$
		$\frac{3}{3}$

Real Life Number Line Pictures

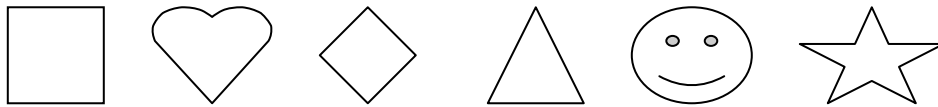




Race Car Runway

Game Directions

- Roll a six-sided cube with the following shapes:



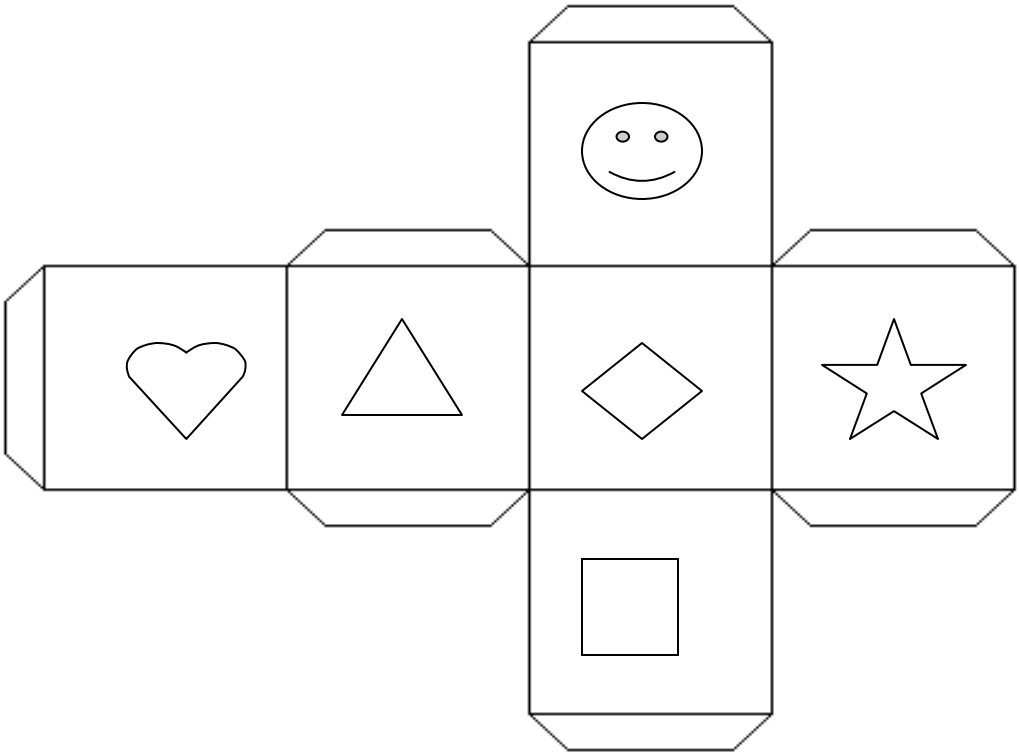
- Find a fraction to take the place of the symbol rolled

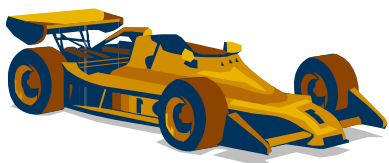
Example: If you rolled the die and landed on the star then find a fraction that could be placed in the location where a star is located on the Racecar Runway.



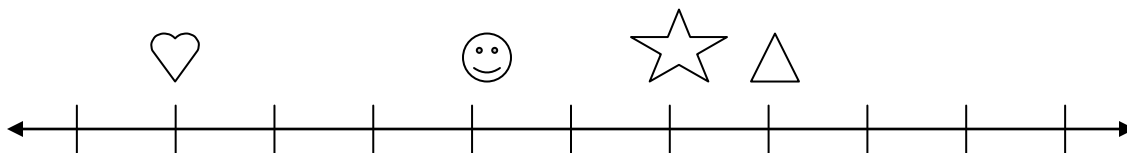
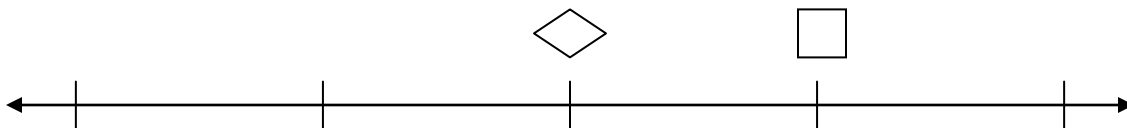
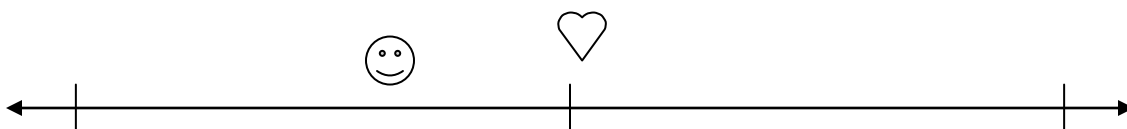
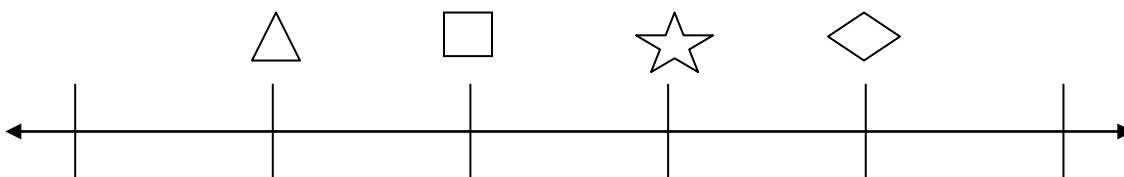
- Students must find a fraction on the placemat to replace the shape on the number line.
- Once you plot a fraction on the number line cover that fraction with a two-sided counter on the placemat.
- The first player to cover four fractions in a row on the placemat is the winner!

Six-Sided Shape Cube





Race Car Runway



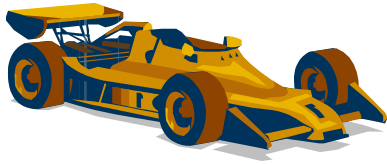
Placemat #1

$\frac{1}{3}$	$\frac{2}{3}$	$\frac{4}{4}$	$\frac{3}{4}$
$\frac{4}{8}$	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{7}{8}$
$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{1}$
$\frac{3}{6}$	$\frac{1}{4}$	$\frac{4}{6}$	$\frac{6}{8}$

Placemat #2

$\frac{10}{10}$	$\frac{10}{12}$	$\frac{6}{12}$	$\frac{16}{20}$
$\frac{5}{20}$	$\frac{7}{16}$	$\frac{2}{10}$	$\frac{1}{10}$
$\frac{9}{12}$	$\frac{8}{20}$	$\frac{3}{5}$	$\frac{2}{5}$
$\frac{4}{5}$	$\frac{8}{12}$	$\frac{8}{10}$	$\frac{15}{20}$

Race Car Assessment



$$\frac{3}{6}$$

$$\frac{1}{3}$$

$$\frac{2}{5}$$

$$\frac{3}{4}$$

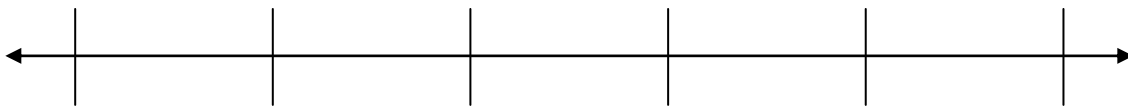
$$\frac{2}{2}$$

$$\frac{2}{4}$$

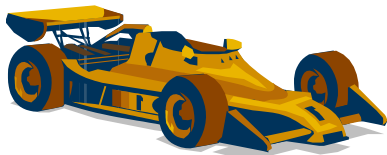
$$\frac{7}{10}$$

$$\frac{4}{5}$$

Directions: Place each fraction on the proper place on the number line. Be sure to label the beginning, end, and middle point of each number line. Also think about fractions equivalent to $\frac{1}{2}$ and one whole.



Race Car Assessment



$$\frac{3}{6}$$

$$\frac{1}{3}$$

$$\frac{2}{5}$$

$$\frac{3}{4}$$

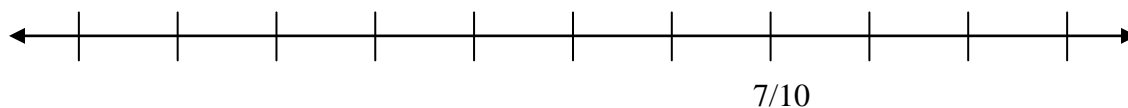
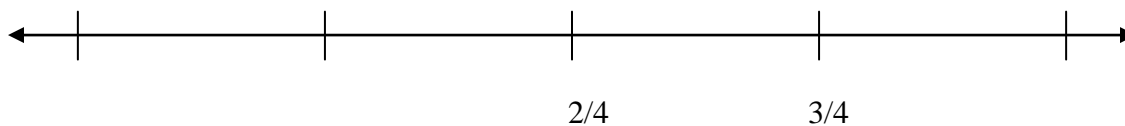
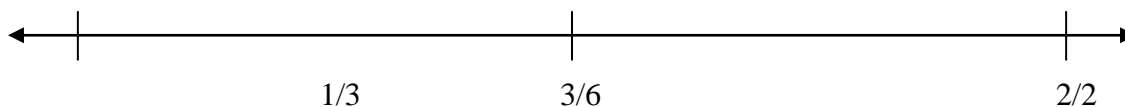
$$\frac{2}{2}$$

$$\frac{2}{4}$$

$$\frac{7}{10}$$

$$\frac{4}{5}$$

Directions: Place each fraction on the proper place on the number line. Be sure to label the beginning, end, and middle point of each number line. Also think about fractions equivalent to $\frac{1}{2}$ and one whole.







Comparing Fraction Practice

Directions: Use the fractions bars to complete numbers 1-9.

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{2}$				$\frac{1}{2}$			
<u>1 whole</u>							
$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$
$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

Directions: Compare the below fraction. Write $<$, $>$, or $=$ in the circle.

1. $\frac{6}{8}$ $\frac{1}{2}$

2. $\frac{2}{3}$ $\frac{4}{6}$

3. $\frac{1}{3}$ $\frac{1}{2}$

4. $\frac{3}{4}$ $\frac{3}{8}$

5. $\frac{2}{3}$ O $\frac{8}{12}$

6. $\frac{1}{3}$ O $\frac{2}{6}$

7. $\frac{5}{10}$ O $\frac{5}{8}$

8. $\frac{1}{4}$ O $\frac{3}{8}$

9. The Green Candy Store was giving out free chocolate mint candy bars. Jack had $\frac{2}{8}$ of a bar. Lauren had $\frac{4}{12}$ of a bar. Donna had $\frac{1}{6}$ of a bar.

Who had the smallest piece of candy bar? Explain how you know using pictures or numbers.

10. List the pieces of candy bars in order from least to greatest.



Answer Key

Comparing Fraction Practice

Directions: Use 1 the fractions bars to complete numbers 1-9.

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{2}$				$\frac{1}{2}$			
<u>1 whole</u>							
$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$
$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$	
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

Directions: Compare the below fraction. Write <, >, or = in the circle.

1. $\frac{6}{8} > \frac{1}{2}$

2. $\frac{2}{3} = \frac{4}{6}$

3. $\frac{1}{3} < \frac{1}{2}$

4. $\frac{3}{4} > \frac{3}{8}$

5. $\frac{2}{3} = \frac{8}{12}$

6. $\frac{1}{3} = \frac{2}{6}$

7. $\frac{5}{10} < \frac{5}{8}$

8. $\frac{1}{4} < \frac{3}{8}$

9. The Green Candy Store was giving out free chocolate mint candy bars. Jack had $\frac{2}{8}$ of a bar. Lauren had $\frac{4}{12}$ of a bar. Donna had $\frac{1}{6}$ of a bar.

Who had the smallest piece of candy bar? Explain how you know using pictures or numbers.

Donna has the smallest piece because the fractions bars above show that $\frac{1}{6}$ is smaller than the other fractions. Student my draw or use other

example that make sense to explain their answers.

10. List the pieces of candy bars in order from least to greatest.

$$\frac{1}{6}$$

$$\frac{2}{8}$$

$$\frac{4}{12}$$





Comparing Fractions Problems Solving

Directions: Read each problem and answer the question.

1. Noah drew a line that was $\frac{7}{8}$ of an inch. Leah drew a line that was $\frac{4}{6}$ of an inch. Which person's line was longer?

2. Jenny is on the track team. On Monday she ran $\frac{3}{4}$ of a mile. On Tuesday she ran $\frac{1}{3}$ of a mile. Which day did she run the farthest?

2. Coach Carter ordered shorts for the basketball team. Of the shorts he ordered, $\frac{1}{3}$ were size small, $\frac{1}{2}$ were size medium, and $\frac{1}{6}$ were size large.

Below order the sizes from least to greatest.

3. Sara does not like to drink prune juice .Each day her mother gives her a full bottle at breakfast.

On Monday she drank $\frac{1}{2}$ of the bottle.

On Tuesday she drank $\frac{2}{6}$ of the bottle.

On Wednesday she drank $\frac{8}{12}$ of the bottle.

On which day did she drink the least prune juice?

4. Brief Constructed Response

Step A

Is $\frac{6}{8}$ is greater than $\frac{4}{8}$?

Step B

Use what you know about fractions to explain why your answer is correct. Use numbers and/or pictures in your explanation.



Comparing Fractions Problems Solving

Directions: Read each problem and answer the question.

1. Noah drew a line that was $\frac{7}{8}$ of an inch. Leah drew a line that was $\frac{4}{6}$ of an inch. Which person's line was longer? **Noah**

2. Jenny is on the track team. On Monday she ran $\frac{3}{4}$ of a mile. On Tuesday she ran $\frac{1}{3}$ of a mile. Which day did she run the farthest? **MON**

3. Coach Carter ordered shorts for the basketball team. Of the shorts he ordered $\frac{1}{3}$ were size small, $\frac{1}{2}$ were size medium, and $\frac{1}{6}$ were size large.

Below order the sized from least to greatest. $\frac{1}{6}$ $\frac{1}{3}$ $\frac{1}{2}$

4. Sara does not like to drink prune juice .Each day her mother gives her a full bottle at breakfast.

On Monday she drank $\frac{1}{2}$ of the bottle.

On Tuesday she drank $\frac{2}{6}$ of the bottle.

On Wednesday she drank $\frac{8}{12}$ of the bottle.

On which day did she drink the least prune juice? ***Tuesday***

5. Brief Constructed Response

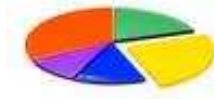
Step A

Is $\frac{6}{8}$ is greater than $\frac{4}{8}$? YES

Step B

Use what you know about fractions to explain why your answer is correct. Use numbers and/or pictures in your explanation.

Answers will vary.



Comparing Fractions Summative Assessment

Name: _____

Date: _____

1. Circle the best answer.



$$\frac{1}{4} = \frac{?}{8}$$

Ⓐ 2

Ⓑ 3

Ⓒ 4

Ⓓ 6

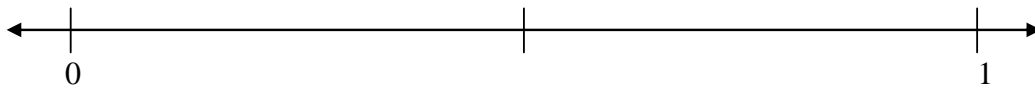
2. Order the following fractions on the number line:

$$\frac{1}{2}$$

$$\frac{6}{10}$$

$$\frac{9}{10}$$

$$\frac{3}{10}$$



3. Which fraction is closest to one whole?

Ⓐ $\frac{4}{8}$

Ⓑ $\frac{3}{5}$

Ⓒ $\frac{5}{6}$

Ⓓ $\frac{4}{12}$

4. Which sentence is incorrect?

Ⓐ $\frac{1}{8} < \frac{1}{6}$

Ⓑ $\frac{1}{2} = \frac{3}{6}$

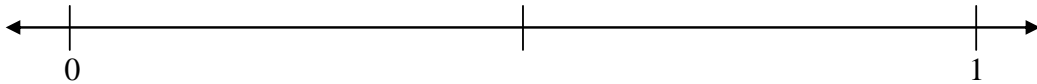
Ⓒ $\frac{4}{6} < \frac{7}{8}$

Ⓓ $\frac{3}{3} > \frac{5}{5}$

5. Brief Constructed Response Item

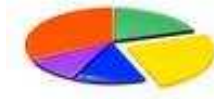
Step A

Place $\frac{6}{8}$ on the number line below.



Step B

Use what you know about fractions to explain why your answer is correct. Use numbers and/or pictures in your explanation.



ANSWER KEY

Comparing Fractions Summative Assessment

Name: _____

Date: _____

Circle the best answer.

--	--	--	--

--	--	--	--	--	--	--

$$\frac{1}{4} = \frac{?}{8}$$

A 2

B 3

C 4

D 6

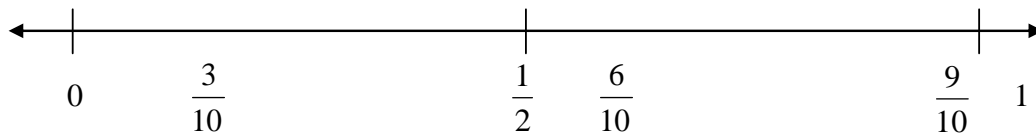
Order the following fractions on the number line:

$$\frac{1}{2}$$

$$\frac{6}{10}$$

$$\frac{9}{10}$$

$$\frac{3}{10}$$



Which fraction is closest to one whole?

A $\frac{4}{8}$

B $\frac{3}{5}$

C $\frac{5}{6}$

D $\frac{4}{12}$

Which sentence is incorrect?

Ⓐ $\frac{1}{8} < \frac{1}{6}$

Ⓑ $\frac{1}{2} = \frac{3}{6}$

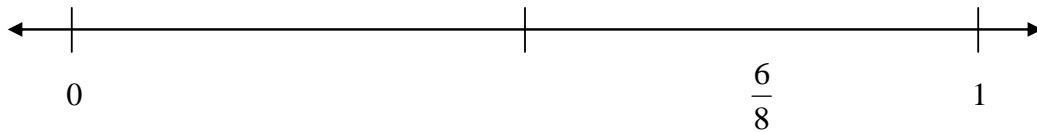
Ⓒ $\frac{4}{6} < \frac{7}{8}$

Ⓓ $\frac{3}{3} > \frac{5}{5}$ **X**

Brief Constructed Response Item

Step A

Place $\frac{6}{8}$ on the number line below.



Step B

Use what you know about fractions to explain why your answer is correct. Use numbers and/or pictures in your explanation.

Answer will vary
